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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/389,085	09/02/1999	JOE H. MULLINS	UNME-0019-1	4882

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EXAMINER

GRIER, LAURA A

ART UNIT PAPER NUMBER

2644

DATE MAILED: 06/05/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/389,085

Applicant(s)

MULLINS, JOE H.

Examiner

Laura A Grier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 3,8,11,16,17 and 21-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10,12-15,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 4,5,9 and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. The indicated allowability of dependent claims 8 and 17 (now cancelled and incorporated into the existing independent claims) is withdrawn in view of the rejection set forth below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-2, 4-10, and 12-13** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claim 1, the phrase "in such a manner as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. The phrase is synonymous to the phrase "such as". See MPEP § 2173.05(d).

Regarding dependent claims 2, 4-10, and 12-13, they are rejected to based on the rejection of claim 1.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. **Claims 1-2, 6-7 and 14-15** are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al., U. S. Patent No. 5588065.

Regarding **claims 1 and 14**, Tanaka et al. (herein, Tanaka) discloses a bass reproduction speaker apparatus. Tanaka's disclosure (figure 8) comprises a cabinet with an opening wherein has a speaker (71) inversely position within, which reads on a 1st speaker; a passive radiator (73a) positioned opposite the speaker within the cabinet, which reads on a passive radiator; and a detection circuit (75) for detecting feedback of the speaker, wherein the feedback of the speaker includes the vibrations and/or motions of the passive radiator, wherein when the speaker vibrates with the confined area of the cabinet it effects the motion of the radiator, and thus when the radiator vibrates the speaker's motion is effected as well; further, Tanaka discloses that the detection may be a sensor such as one of a moving coil sensor, which can constitutes as a speaker sensor coupled to a speaker external diaphragm, which reads on sensor being a speaker. Further Tanaka discloses that this system has a high output of about 100 dB, which provides inherent support of sensor having a S/N ratio of about least 100dB, wherein the unwanted tones, and/or other distortions are unlikely to occur (col. 22, lines 8-62, col. 23, lines 7-21 and col. 13, lines 24-34 and 45-48).

Regarding **claims 2 and 15**, Tanaka discloses everything claimed as applied above (see claim 1). Tanaka further discloses the system as one for an audio signal having a frequency of 200 Hz or less (col. 1, lines 11-14), which depicts low frequency, which reads on a low frequency audio system.

Regarding **claim 6**, Tanaka discloses everything claimed as applied above (see claim 1). Tanaka further discloses an amplifier (74) for receiving the feedback as an input from the

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detection circuit (sensor) which provides support of adjusting the output the speaker of the sensed signal.

Regarding **claim 7**, Tanaka discloses everything claimed as applied above (see claim 1). Tanaka further discloses the speaker unit having a width of 46 cm and the passive radiator having a width of 43 cm (col. 21, line 67 and col. 22, line 9-10), which reads on the sensor's maximum width being smaller than the maximum width of the 1st speaker.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 12 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of in view of Bertagni et al., U. S. Patent No. 5693917.

Regarding **claims 12 and 19**, Tanaka discloses everything claimed as applied above (see claim 1 and 14, respectively). However, Tanaka fails to specifically disclose electrodynamic planar speaker. The examiner maintains that such a loudspeaker was well known in the art.

Regarding the electrodynamic planar speaker, in a similar field of endeavor, Bertagni disclose a planar diaphragm loudspeaker comprising electromagnetic drivers, which constitutes an electrodynamic planar speaker.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Tanaka by incorporating an electrodynamic planar speaker

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for the purpose of providing dynamic quality and good efficiency in sound output with improved frequency response and with simpler manufacturing and economical benefits as taught by Bertagni in col. 3, lines 62-67.

9. **Claims 13 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka.

Regarding **claims 13 and 20**, the Tanaka combination discloses everything claimed as applied above (see claim 1 and 14, respectively). However, fail to specifically disclose electrostatic planar speaker. The examiner takes official notice of the fact that an electrostatic planar speaker was well known in the art. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of the Tanaka combination by providing an electrostatic planar speaker for the purpose of employing a small (thin) speaker in size, yet providing good sound quality.

10. **Claim 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka and Hobelsberger, U. S. Patent No. 5812686.

Regarding **claim 10**, Tanaka discloses everything claimed as applied above (see claim 1). However, Tanaka fails to specifically disclose acoustic absorbing material within the cabinet. The examiner maintains that such material was well known in the art.

Regarding the absorbing material, Hobelsberger disclose a device for sensing a loudspeaker, wherein the housing/cabinet of the loudspeaker comprises a sound absorbing material (col. 3, lines 58-60).

Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of the Tanaka by incorporating an acoustic absorbing material within the cabinet structure of the speaker system for the purpose of absorbing sounds of particular frequencies within the cabinet as desired as taught by Hobelsberger.

11. Claims 4-5, 9 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

The applicant did not provide any arguments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG 
May 31, 2003


FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600